



Wyoming Game and Fish Department

Pinedale Region Angler Newsletter

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Fish Management in the Pinedale Region

Welcome to the 2021 Pinedale Region Angler Newsletter! We had another great year and are here to share many of the management, habitat and culture highlights from previous years.

As always, please feel free to contact us with any comments or questions about the aquatic resources in the Upper Green River and Lower Bear River drainages of Wyoming. Your input is important to us as we manage these resources for you, the people of Wyoming. You'll find all of our contact info on the last page of this newsletter. Thanks for a great 2020 and happy fishing in 2021.

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Fisheries Management



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Fisheries Biologist



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Fisheries Biologist

Aquatic Habitat

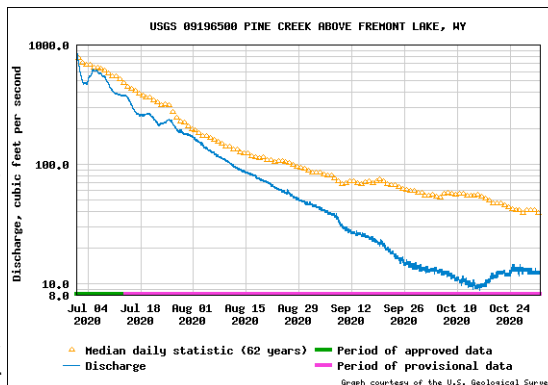


Luke Schultz
Aquatic Habitat Biologist

Drought Continues to Impact Regional Fisheries

Wyoming is one of the driest states in the nation, so water is a precious resource in the Cowboy State. Unfortunately, the western portion of the state has been experiencing drought for a majority of the past two decades. While some organisms are well adapted to handle an occasional period with reduced moisture, the current extended dry spell is reducing habitat quality in many of our prized fisheries in the Pinedale Region.

Soda Lake is a good example of a fishery in the area that has suffered from drought. Trout numbers were at an all-time high in 1997, but crashed over the course of the following six years, which included two years of extreme or exceptional drought. While the severity of the drought moderated in the following years, trout numbers did not begin to rebound for more than a decade. Unfortunately, that increasing trend was short lived, and trout numbers have again declined for the past three years. The water level in Soda Lake dropped by over 17 inches in 2020, and is now at the lowest level seen in decades. The low water level is not favorable for trout survival, so further reductions of trout numbers could occur in future years.



Stream discharge measured in Pine Creek above Fremont Lake, 2020

Habitat in the Bear River near Cokeville, and Pine Creek running through Pinedale, also suffered from drought in 2020. Flows in the Bear River were below average throughout the summer and fall. Conditions were particularly bad in August and early September, when the flow was only about half of normal. Pine Creek fared better in early summer, but flows declined as the dry summer dragged on. By mid-October, flows were approximately 80% below normal. Such exceptionally low flows desiccate the stream bed, and eliminate habitat for both fish and the aquatic insects they feed on.



Dry section of Fall Creek above the bridge to Meadow Lake

Perhaps the most dramatic example of the impact of drought in the Pinedale Fisheries Management Region is Fall Creek. Sometime prior to October 10, 2020, this stream went dry for several miles below Burnt Lake. A sample collected there in August 2008 showed that the stream was 26 feet wide. At that time it held nearly 1,600 trout per mile, along with abundant populations of mountain sucker, speckled dace, and mottled sculpin. While a few fish may have survived the loss of flow in 2020 by taking refuge in the few, isolated pools that were observed, the trout fishery was essentially eliminated for all practical purposes.

Many fisheries in the Pinedale Region are in desperate need of additional precipitation, but a single wet winter will likely not be enough to erase the moisture deficit that has developed over the course of two decades. Many springs and wetlands in the area have dried up, and soil moisture values are now very low. Therefore, much of the rain and snow we now receive soaks into the ground before it can run off to fill our streams and lakes.

Fisheries managers will have to adjust fish stocking in order to compensate for the impacts of ongoing drought, but there isn't a "one size fits all" solution for this problem. Some waters that previously held self-sustaining trout populations will likely need to be stocked with hatchery fish in order to provide sustainable fisheries. At other waters that already depend on hatchery fish, stocking rates may have to be reduced as habitat quality deteriorates. Therefore, anglers should expect to see some changes at their favorite waters if drought conditions continue.

- Pete Cavalli

New Interactive Fishing Guide

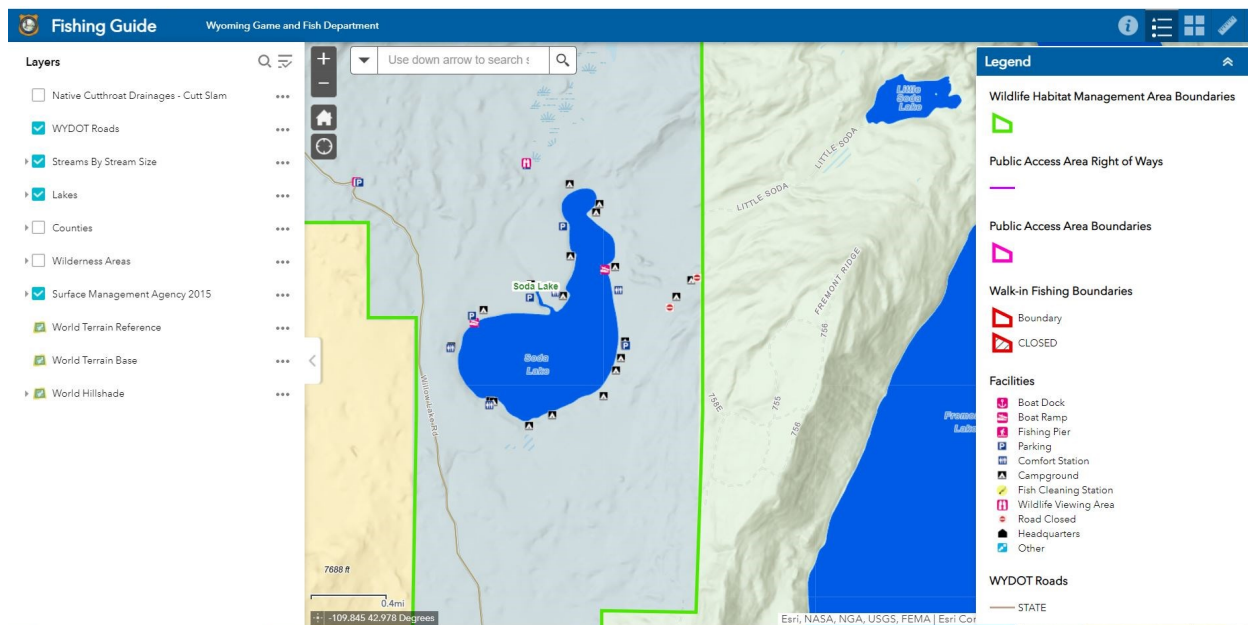
Are you thinking of visiting Wyoming for a fishing trip? Are you the diehard wilderness angler looking for that next Golden Trout water? The Wyoming Game and Fish Department has developed a new tool to help anglers find their next destination. Our new Interactive Fishing Guide will give you a ton of information with a simple click. Start by visiting our website at www.wgfd.wyo.gov. From there, click on 'Fishing and Boating' (blue box at the top of the screen), then click on "Places to fish and boat in Wyoming" (green box). Lastly, click on the Interactive Fishing Guide link, and you are there.

The Interactive Fishing Guide was created to help anglers explore the wealth of Wyoming fishing opportunities. The simplest features allow users to zoom in and click on any water to see the species of fish present at that water. Click the 'Zoom-to' feature (at the bottom of the species present box) and the available facilities such as boat ramps, camping, and comfort stations will appear on the screen. Every water that you click on is also linked to our Fishing Regulations and the contact information for the specific regional office should you have additional questions.

Several GIS layers are available with this fishing guide to assist you in narrowing down a new location to fish simply by turning them on. For instance, if you are thinking of fishing a wilderness area, simply turn on the "Wilderness Areas" layer. From there you can click on individual lakes and streams to see where the elusive Golden Trout are found. Perhaps you're interested in completing our Cutt-Slam. Simply turn on the "Native Cutthroat Drainages" layer and you'll see the native drainages and waters for our four native cutthroat subspecies. To speed up your search, use the search feature at the top of the screen. Here you can search lakes and streams by species present or by water name. For instance, typing "Tiger Musky" into the search box brings up the 14 Wyoming lakes with that species.

We welcome you to give the new Interactive Fishing Guide a try the next time you're looking for a new water to fish. And as always, Happy Fishing!

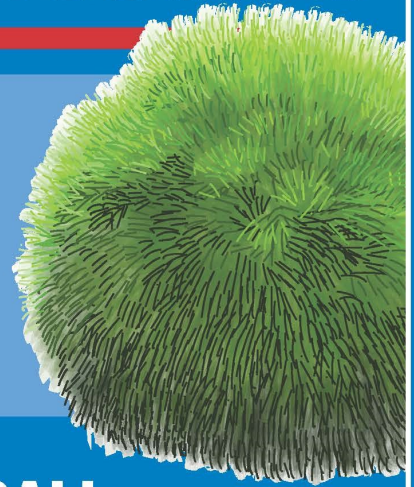
- WGFD Staff



Soda Lake in our Interactive Fishing Guide. Map layers (left) can be turned on and off, while the legend (right) will help you find items such as boat ramps and access areas.

YOUR MOSS BALL MAY CARRY INVASIVE MUSSELS

Moss balls are a popular plant choice for aquariums and decorative displays. But they also can be carriers of zebra mussels, which if detected in Wyoming's waters, could have catastrophic impacts to the water, the biodiversity of the area, recreation, municipalities and water users.



IF YOU OWN A MOSS BALL:

Step 1



Remove any pets from the water and tank.

Step 2

Remove the ball, other plants and any water from the aquarium and put them into a heat-safe pot.



Step 3

Inspect the ball and tank for zebra mussels and if you find any contact your local Game and Fish regional office.



Step 4



Boil the balls, plants and any water it's been in contact with for at least five minutes.

Step 5

Dispose of the ball and other plants in the trash.



Step 6

Pour out the boiled water on a semi-permeable surface. That could be a houseplant or outside — like grass or soil — not located near standing water or a storm drain.



Do not:



Don't dump the tank water in the toilet, down the sink or in the sewer system.



Don't release your aquarium critters or plants into the wild by dumping them in a river or lake.



Habitat Projects Help Improve Angling Opportunities in the New Fork River

Anglers in the New Fork River will have more reasons to chase trout this year with the completion of two habitat enhancement projects. Both projects are located between the East Fork confluence and Hwy 351, and address habitat limitations common throughout the lower river. These two projects are part of a broader series of projects planned for the coming years on the New Fork River to revitalize this valuable fishery.

The Wyoming Game and Fish Department (WGFD) is working closely with Bureau of Land Management (BLM) and Trout Unlimited at the “Gas Wells” site off the Boulder South Road to reconstruct a boat access on the lower New Fork and perform about 2/3 mile of habitat work. The BLM and WGFD specifically targeted the Gas Wells site because of the value it provides for public access. Between the town of Boulder and its confluence with the Green River, only about four miles of the river corridor is public land on both banks. The two miles of river at the Gas Wells site is by far the largest parcel of public land and river access.

Work for the first phase of the New Fork Gas Wells began in April 2021 and will be ready for boaters this summer. A variety of stream structures are being constructed using wood and rock. These structures will reduce bank erosion and provide hiding cover for fish. The hope is that these habitat enhancements will hold more trout in the reach and improve angling opportunity for both boat and bank anglers. The remainder of the 2-mile project reach will be constructed in coming years and complete the restoration work on this valuable area.



Heavy equipment works to stabilize an eroding bank on the New Fork River

Several river restoration techniques are being used on the Gas Wells to stabilize actively eroding river banks and improve fish habitat. A new river bank was constructed using trees with root wads attached and other woody material and the new bank elevation is lower than previous. This “bankfull bench” utilizes the rootwads to dissipate stream energy along the bank to reduce lateral erosion, and create deep water habitat with cover that fish love. The lowered elevation of the bank also helps to alleviate stream energy at high flows by outleting high flows on the floodplain. Lastly, the bankfull bench will support quality wetland vegetation. In turn, this vegetation supports healthy riparian insect communities that fall into the river and provide additional food for trout.

The project will also reconstruct a boat ramp and access area at the site that was lost several years ago due to bank instability and erosion on this outside bend. The bankfull bench will help stabilize the ramp at this location, and the new ramp should provide a much better launching experience. A parking area and comfort station will also be constructed to allow boat anglers, bank anglers, hunters and other recreationists to use and enjoy the river. Our hope is that the improved habitat will hold more fish, and the access area will allow anglers to enjoy the benefits of this project.

If you are looking for a place to launch your boat this summer (or even better, during the fall to take advantage of feisty browns), consider the float from the East Fork to the Gas Wells. This is a simple shuttle and

Habitat Projects (cont.)

a relatively short 4 mile drift with improving habitat. If launching at the Gas Wells, consider the shortish float (but longer shuttle) to the Remmick Access Area, or float all the way to Highway 351. Parts of the latter float will have habitat work conducted in coming years as well.

Should you opt for that longer float, you'll pass the Tatro Meander Restoration. This project is about a mile downstream of the Remmick Access Area and was completed in August 2020. While the project occurred on private property, the east bank of the river is BLM-managed and publically accessible with a short hike from the bluffs south of the Wild Horse Ranch Road. This two track is pretty easy to find off the Boulder South Road. This work is a great example of how the WGFD and private landowners work together to improve fish habitat for all.

Prior to this work, this segment of river had roughly 1700 feet of bank that was eroding 2-3 feet annually and contained very little fish habitat. The erosion also resulted in the loss of several acres of valuable riparian habitat for the landowner and contributed hundreds of tons of sediment to the New Fork annually. In fact, the river had eroded over 100 feet to the west in the last fifty years.

Heavy equipment crews in 2020 used a couple of approaches to address these issues. On the upstream end of the project, they used rootwads and a bankfull bench to rebuild the stream bank, similar to techniques used at the Gas Wells site. However, crews also excavated and deepened a pool along the bench to serve two functions. First, the pool will dissipate stream energy to help reduce bank erosion, and secondly (and most importantly to fishermen), the pool will provide deep habitat for a variety of fish. Cover provided by the rootwads and regeneration of streamside vegetation will further enhance habitat quality here.



A bankfull bench is constructed on the New Fork River

Crews also used boulders to build structures that will help direct flow of the river away from the stream bank and reduce erosion. Rock vanes that angle upstream from the bank slow water velocities near the stream bank, create areas of fine sediment deposition that quickly grow vegetation, and create small scour pools at their terminus that provide deep water with rock cover. Four of these vanes were used for the downstream segment of this restoration in the natural riffle. From a fish standpoint, these vanes will provide holding cover in feeding habitats (riffles). A savvy angler will note these structures and cast accordingly.

The Game and Fish Department is excited about the completion of these projects after many years of planning, designing, and fundraising to implement the work. We hope that they provide enhanced opportunities for anglers in the Pinedale Region, as well as give folks more places to enjoy the river. The Aquatic Habitat program in the Fish Division is continually seeking additional opportunities to improve habitat in the region. If you know of some spots that might benefit from habitat work, don't hesitate to reach out!

- Luke Schultz

Trophy Lake Trout in Fremont Lake

Fremont Lake is a large, deep natural lake with a small dam that holds water used for irrigation. Colorado River cutthroat trout and mountain whitefish were the only sportfish inhabiting this water prior to the introduction of additional species many decades ago. The first stocking of lake trout (also known as mackinaw) was recorded in 1933, and rainbow trout were introduced two years later. “Forage” (likely reidside shiner) was stocked in 1950, and kokanee salmon were added in 1952. In addition, brown trout and brook trout have also found their way into the lake, likely by migrating in from other waters in the drainage. Currently, all of these species, with the exception of the native Colorado River cutthroat trout, are still found in Fremont Lake. However, rainbow trout and kokanee salmon are the only species that are still stocked.



Trophy lake trout from Fremont Lake, cir. 1965

Historically, Fremont Lake was highly regarded for the big lake trout it produced. This lake had a reputation for producing fish over 25 pounds, and anglers were willing to travel long distances for the opportunity at one of those trophies. Unfortunately, some anglers in the area now refer to Fremont Lake as “The Dead Sea”, due to the fact that catch rates of trout can be very low. Given this change in angler attitudes toward Fremont Lake, a person unfamiliar with the lake may wonder whether it still holds any big fish.

Fishing derbies at Fremont Lake have been held for many years, providing some insight into the trophy fishery in the lake. Data showed that the winter derbies drew an average of about 282 anglers each year, while the summer derbies attracted approximately 96 fishermen annually. The biggest fish caught during the ice fishing derbies was a lake trout weighing 23 pounds, while the biggest fish caught during the Father’s Day derbies was a lake trout weighing in at a whopping 27.4 pounds. The smallest fish to win a winter derby weighed 10.8 pounds, while the smallest derby winner in the summer weighed 13.2 pounds. The definition of a “trophy” lake trout is highly subjective, but many anglers set that bar at 10 pounds. Using this criteria, an analysis of the number of trophies caught shows that summer derbies produced an average of over four trophy fish per contest, while ice derbies saw an average of three trophies. A rough estimate shows that several hundred hours of fishing was logged for each trophy fish caught during summer derbies. Approximately three times as much effort was required to catch a trophy during the winter derbies.

The water in Fremont Lake is very low in nutrients, therefore, trout tend to grow more slowly than those living in more productive lakes. Historically, Fremont Lake likely produced more trophy fish, and the biggest fish were probably even larger than they are now. Lake trout need to feed on fish in order to grow to trophy size, but the prey base is limited in Fremont Lake. Native suckers and minnows were more common in Fremont Lake when lake trout were introduced, and those forage fish allowed stocked lake trout to grow quickly. However, large lake trout eventually became numerous enough to overrun their food base. Suckers and minnows are now rare in Fremont Lake, so the growth rate of lake trout has declined.

While Fremont Lake isn’t likely to produce a lake trout that will exceed the state record of 50 pounds, it does still produce fish big enough to tempt many fisherman. Anglers at Fremont Lake still report catching lake trout weighing over 25 pounds, and rarely up to 40 pounds. Given the chance of catching big fish, Fremont Lake is a destination that shouldn’t be overlooked by anglers looking to land a trophy lake trout.

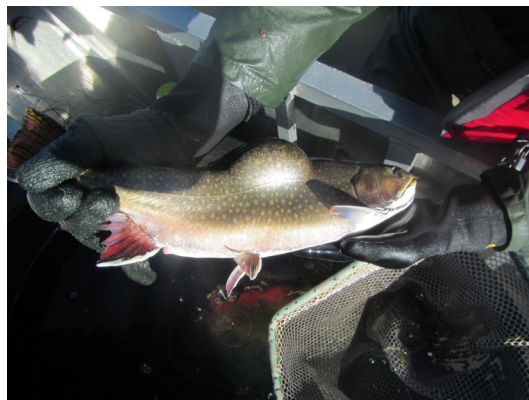
-Pete Cavalli

Do Fish Get Sick?

After suffering from the symptoms of a common cold or the flu, not to mention the months of hardship brought on by COVID-19, nobody needs to be reminded that we can be infected by viruses. And anyone who has ever had strep throat or food poisoning can attest to the fact bacteria can cause big problems for people. Fungus can get us too; just think of athlete's foot. We also suffer from parasites like giardia, and sometimes our health deteriorates from problems caused by things like poisons and nutritional deficiencies. What many people don't realize is that fish can also suffer from all of those types of maladies, too.

Fish can be infected by many different types of viruses, and they are often spread quickly within a population. Viruses are often deadly to fish, and we don't have vaccines or treatments for viruses in fish. This fact makes viruses especially problematic for fish raised in a hatchery. Fortunately, many viruses will only infect certain species of fish, and their occurrence in hatcheries is very rare.

Many species of bacteria are also problematic for fish, and the symptoms of infection vary widely. Depending on the type and the severity, a fish may exhibit swelling, hemorrhages, skin lesions, frayed fins, or skeletal deformities. One bacterial infection found in trout is known as furunculosis. This disease can cause a boil-like lump to form on the body of the fish. It can also cause open sores to form on the body, or it may show no obvious symptoms.



A large lump on a brook trout caused by a bacteria

Folks that keep fish in aquaria have probably occasionally seen a growth on their fish that looks like cotton or wool. These growths are caused by a fungal infection, and fish in rivers and streams can be infected by fungus, too. While fungal spores can be widespread, they are usually only a problem for fish if an individual gets injured, or if a population is stressed by something like poor water quality. While fungus on fish in an aquarium can be treated, it is not practical to treat fish populations in rivers or lakes.



A large tapeworm found in the body cavity of a speckle dace from Fremont Lake

A variety of parasites can also cause problems for fish. Some of these parasites, like whirling disease, are microscopic and can kill a fish quickly. Others, like roundworms and tapeworms, can be very large, but can be carried by a fish for long periods of time. Some parasites have very complex life cycles. One example, known as "black spot" lives in a bird's intestine as an adult. It lays eggs, which are deposited in water with the bird's feces. The eggs hatch into a free-swimming form that will burrow into a snail. Eventually, it will transform into another free-swimming form before leaving the snail. At that point it must swim until it can find a fish to burrow into. It then stays in the fish until it is eaten by a bird where it will mature into its adult form. Therefore, this parasite can't complete its lifecycle without the help of a bird, a snail, and a fish.

As you can see, fish do indeed get sick from a variety of causes. Even though the list of ailments and symptoms discussed above is lengthy, it is just a very brief introduction. While many anglers have never noticed anything wrong with the fish they have caught, a more careful examination may have revealed one or more diseases or parasites. Fortunately, most of the disorders that affect fish in Wyoming are harmless to humans.

- Pete Cavalli



**Wyoming Game and
Fish Department**
*Conserving Wildlife-Serving
People*

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Important Dates to Remember in 2021

- **March 1– Nov 30** All watercraft entering Wyoming are required to be inspected for Aquatic Invasive Species.
- **May 1– Soda Lake, Meadow Lake, and Burnt Lake** open to fishing at 6 a.m.
- **June 5— Kids Fishing Day and Wyoming's Free Fishing Day** The Wyoming Game and Fish Commission has declared June 5, 2021 Free Fishing Day to coincide with the beginning of the National Fishing and Boating week. Residents and nonresidents may fish Wyoming waters (excluding Wind River Indian Reservation and Yellowstone National Park) without a fishing license or conservation stamp. Free Fishing Day will also coincide with Kids Fishing Day at the Pinedale Town Pound at Boyd Skinner Park in Pinedale where WGFD employees will be present to help with fishing and provide rods to those that don't have them.
- **November 15—Soda Lake and Burnt Lake** closed to fishing.
- **November 21—Meadow Lake** closed to fishing.

We welcome all questions and comments on this newsletter or about the fisheries resources within the Pinedale Region. Please feel free to contact us or send an email to:

darren.rhea@wyo.gov

